

CLAIMS

WHAT IS CLAIMED IS:

1. A breathable elastomeric film having cells created therein by a cell opening agent, said film being at least partially air permeable, capable of transmitting water vapor therethrough and being elongatable.
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2. The breathable elastomeric film of Claim 1, wherein said film comprises a material selected from the group consisting of a block copolymer having the general formula A-B-A' or A-B, where A and A' are each a thermoplastic polymer endblock which contains a styrenic moiety and where B is an elastomeric or rubber polymer midblock such as a conjugated diene or a lower alkene polymer elastomeric and a A-B-A-B
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3. The breathable elastomeric film of Claim 1, wherein said film is formed by casting, extrusion or by mixing and dispensing to a moving belt methods.
4. The breathable elastomeric film of Claim 1, wherein said cell opening agent is an azodicarbonamide, water, a low boiling point solvent, a fluorocarbon, a mixture of an
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5. The breathable elastomeric film of Claim 1, wherein said cells are open to the film surface, partially open or closed.

6. A polymer film material having cells created therein by a cell opening agent, at least one of said cells being closed, said closed cells containing a solid, liquid or gas capable of timed release.
7. The polymer film material of Claim 6, wherein said solid, liquid or gas is released in response to an external stimulus.
8. The polymer film material of Claim 7, wherein said external stimulus is increased temperature from a user.
9. The polymer film material of Claim 7, wherein said solid, liquid or gas is active.
10. The polymer film of Claim 9, wherein said solid, liquid or gas is capable of inhibiting yeast filament formation.

11. A breathable elastomeric composite material, comprising: at least one layer of an extensible material laminated to at least one layer comprised of an elastomeric film, said film having at least one aperture defined therein created by a cell opening agent.
12. The breathable elastomeric composite material of Claim 9, wherein said film comprises a material selected from the group consisting of a block copolymer having the general formula A-B-A' or A-B, where A and A' are each a thermoplastic polymer endblock which contains a styrenic moiety and where B is an elastomeric or rubber polymer midblock such as a conjugated diene or a lower alkene polymer elastomeric and A-B-A-B tetrablock copolymer.
13. The breathable elastomeric composite material of Claim 9, wherein said film is formed by casting or extrusion methods.
14. The breathable elastomeric composite material of Claim 9, wherein said cell opening agent is a material capable of forming openings in said film.
15. The breathable elastomeric composite material of Claim 9, wherein said cell opening agent is an azodicarbonamide, water, a low boiling point solvent, or the gas liberated by the reaction of a mixture of an isocyanate and a polyol with water.
16. The breathable elastomeric composite material of Claim 9, wherein said cells are open to the film surface, partially open or closed.
17. The breathable elastomeric composite material of Claim 9, wherein said composite material has an average water vapor transmission rate of from about 300 to about 20,000 g/m²/24 hours.
18. The breathable elastomeric composite material of Claim 9, wherein said composite material has an average water vapor transmission rate as measured by the INDA

(Association of the Nonwoven Fabrics Industry) test procedure IST-70.4-99 of from about 300 to about 20,000 g/m²/24 hours.

19. A personal care product, comprising: at least one layer of an extensible material laminated to at least one layer comprised of an elastomeric film, said film having apertures created therein by a cell opening agent.
20. The personal care product of Claim 19, wherein said outer cover has an average water vapor transmission rate as measured by the INDA (Association of the Nonwoven Fabrics Industry) test procedure IST-70.4-99 of from about 300 to about 20,000 g/m²/24 hours.
21. The personal care product of Claim 19, wherein said product is a bandage, a wound dressing, a diaper, an incontinence garment, a panty shield or liner, or a perspiration shield.

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25. A method of aperturing and controlling pore size distribution in an elastomeric material, comprising:

- a) providing an elastomeric polymeric material;
- b) providing a cell opening agent;
- c) mixing said polymeric material and said cell opening agent to form a mixture;
and,
- d) extruding said mixture through an extrusion die into a sheet such that apertures will form at least partially within said sheet from the decomposition of said cell opening agent into a gas.

26. A method of forming a laminate material, comprising:

- a) providing a layer of a spunbond material;
- b) providing a layer of an elastomeric film having apertures formed therein by mixing a polymer material with a cell opening agent to form a mixture and extruding said mixture through a die such that apertures are formed therein; and,
- c) laminating said elastomeric film and said spunbond.

27. A method of forming a laminate material, comprising:

- a) providing an isocyanate material;
- b) providing a polyol material;
- c) providing a catalyst material;
- d) providing an effective amount of water;
- e) mixing said polyol material, catalyst material and water to form a mixture;
- f) mixing the mixture of step e) with said isocyanate material to form a second mixture; and,
- g) dispensing said second mixture through a die head onto a surface to form a cellular foam.

28. The method of Claim 27, further comprising step h) curing said foam.

29. The method of Claim 28, further comprising step i) laminating said cured foam to at least one layer of a non-extensible material so as to form a breathable elastomeric material.

30. The method of Claim 29, further comprising the step of adding a crosslinking agent.

31. The method of Claim 29, further comprising adjusting the polyol functionality to adjust the adhesive level desired.

32. A breathable elastomeric material, comprising at least one layer of an elastomeric material having apertures formed therein by a process comprising:

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- a) providing an elastomeric polymer material;
 - b) providing a cell opening material capable of releasing a gas;
 - c) mixing said polymer material and said cell opening material to form a mixture;
- and,

extruding said mixture through an extrusion die such that said cell opening material produces a gas whereby apertures are formed at least partially within the extruded material.

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